

WHAT IS CLAIMED IS:

1. A coordinate detecting method for a touch panel, comprising the steps of:

- (a) converting a plurality of X-axis I/O ports and a plurality of Y-axis I/O ports respectively to form a plurality of X-axis scanning wires and a plurality of Y-axis scanning wires of the touch panel by an orthogonal method;
- (b) transmitting polling signals to the X-axis I/O ports in sequence, which are then transmitted to the X-axis scanning wires;
- 10 (c) storing a plurality of X-axis detection signals from a sensor touching the touch panel according to the polling signals;
- (d) determining a largest X-axis detection signal and a second largest X-axis detection signal, then determining an X coordinate position of the sensor on the touch panel;
- 15 (e) transmitting polling signals to the Y-axis I/O ports in sequence, which are then transmitted to the Y-axis scanning wires;
- (f) storing a plurality of Y-axis detection signals from the sensor touching the touch panel according to the polling signals; and
- 20 (g) determining a largest Y-axis detection signal and a second largest Y-axis detection signal, then determining a Y coordinate position of the sensor on the touch panel.

2. The coordinate detecting method according to Claim 1, wherein the number of X-axis I/O ports or the number of Y-axis I/O ports is an odd number N, and the maximum number of the X-axis scanning wires or the maximum number of the Y-axis scanning wires is $C(N,2)+1$.

25 3. The coordinate detecting method according to Claim 1,

wherein the number of X-axis I/O ports or the number of Y-axis I/O ports is an even number N, and the maximum number of the X-axis scanning wires or the maximum number of the Y-axis scanning wires is $C(N,2) \cdot N/2+2$.

5 4. A coordinate detecting system for a touch panel comprising:

a converting means for converting a plurality of X-axis I/O ports and a plurality of Y-axis I/O ports respectively to form a plurality of X-axis scanning wires and a plurality of Y-axis scanning wires of the touch panel by orthogonal method;

10 a control means for transmitting polling signals to the X-axis I/O ports and the Y-axis I/O ports in order, the X-axis scanning wires and the Y-axis scanning wires having the responding polling signals;

a sensor for detecting a plurality of X-axis detection signals and a plurality of Y-axis detection signals according to the polling signals;

15 a database for storing the X-axis detection signals and the Y-axis detection signals from the sensor; and

20 an arithmetic means for determining a largest X-axis detection signal, a second largest X-axis detection signal, and determining a largest Y-axis detection signal and a second largest value Y-axis detection signal, then determining an X coordinate position and a Y coordinate position of the sensor on the touch panel.

25 5. The coordinate detecting system according to Claim 4, wherein the number of X-axis I/O ports or the number of Y-axis I/O ports is an odd number N, and the maximum number of the X-axis scanning wires or the maximum number of the Y-axis scanning wires is $C(N,2)+1$.

6. The coordinate detecting system according to Claim 4, wherein the number of X-axis I/O ports or the number of Y-axis I/O ports

is an even number N, and the maximum number of the X-axis scanning wires or the maximum number of the Y-axis scanning wires is $C(N,2) - N/2 + 2$.

7. The coordinate detecting system according to Claim 4, wherein the sensor comprises an antenna and a demodulation circuit, the antenna being used to detect the X-axis detection signals and the Y-axis detection signals, and the demodulation circuit being used to demodulate the X-axis detection signals and the Y-axis detection signals, and to transmit the X-axis detection signals and the Y-axis detection signals to the database.

8. The coordinate detecting system according to Claim 7, wherein the sensor further comprises a shielding housing for covering the demodulation circuit to isolate the external noise.